Energy Sector Capacity Building

Monitoring & Evaluation (M&E) Framework and Tools

May 5, 2015

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ESCB: helping secure Jordan's energy future

ISSUE

96%

percent of Jordan's energy that is imported

24%

percent of Jordan's GDP spent on energy imports

595 million JD

total government subsidy for electricity consumption, 2014

ESCB's APPROACH

ESCB applies a broad, adaptable approach to meet the energy sector's evolving needs.

1. **Development and implementation of a framework** to enable utility-delivered energy efficiency programs

2. **Capacity building and institutional strengthening** for public and private sector energy institutions

3. Strengthened presence, capacity and regulation of **energy services companies**

4. Flexible response mechanism for **emergent energy sector needs**

FOUNDATIONS

# M&E RESULTS FRAMEWORK AND INDICATORS

The ESCB M&E approach promotes continuous learning to achieve development results

THREE ITERATIVE STEPS

1 **Strategy and target setting**

- *Work plan* sets out a strategy for program implementation

- *PMP* defines specific indicators and targets to measure progress towards success

- *M&E Database and Dashboard* facilitate continuous data exploration and learning
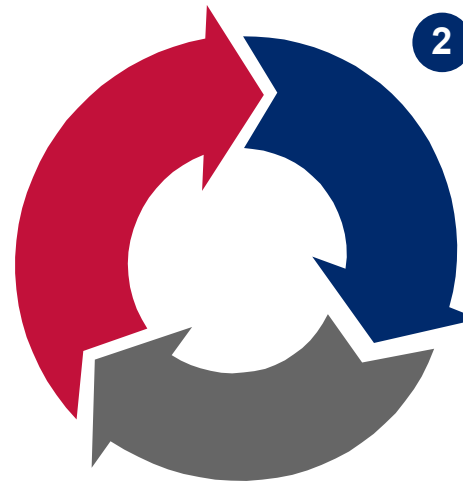
2 **Implementation and monitoring**

- *Timely* data collection

- *Quarterly reviews* of progress towards indicator targets data

- *Implementation adaptations* based on data findings, with USAID approval

3 **Evaluation and reflection**

- *Annual review of overall PMP*

ESCB's performance indicators

ESCB Objective / USAID PMP IR Level

1. **GHG emissions, estimated in metric tons of CO2e**, reduced, sequestered and/or avoided as a result of USG assistance

2. *Number of entities implementing CE* measures as a result of USG assistance

USAID Sub-IR Level

3. **Number of institutions receiving technical assistance** due to USG assistance

4. Validated savings from utilities' forecasted electric demand due to incentive mechanism demand-side-management/clean energy programs

5. *Number of megawatts installed* through alternative energy projects in Jordan supported by USG assistance

6. **Number of clean energy transactions**

7. *Number of laws, policies, strategies, plans, agreements, or regulations* addressing clean energy officially proposed, adopted, or implemented as a result of USG assistance

ESCB Activity Level

8. *ESPs accreditation governing body* established

9. *Number of ESPs* accredited

10. *Proportion of female participants* in USG-assisted programs designed to increase access to productive economic resources

11. *Person-hours of training* completed in technical energy fields supported by USG assistance

KEY

Blue: Standard USAID Foreign Assistance (F) Indicator
Red: USAID/Jordan PMP Indicator
Black: ESCB Custom Indicator

COLLECTING & STORING DATA

INPUT TOOLS
& DATABASE

The ESCB M&E toolkit facilitates the timely collection and analysis of performance data

	M&E Data Input Tools	M&E Database	M&E Dashboard
PURPOSE	Systematically collect useful data on project activities	Centrally validate and store ESCB performance indicator data	Facilitate conversations on ESCB's impact to date through data visualization
TECHNICAL ENVIRONMENT	Microsoft Excel	Microsoft Excel	*Updating:* Tableau Desktop (license required) *Viewing:* Tableau Reader

Each data input tool includes an easy-to-use graphical user interface (e.g. form)

Example Input Tool

Each form is clearly labeled, with a tailored input tool for different types of activities

Instructions on what details to include in each field is provided

Drop-down menus facilitate data validation, reducing human error. Each form also asks for point of contact and source documentation, to ensure traceability of data

We only collect data that is helpful for decision-making. If we don't plan to use it, we don't spend time collecting it.

Energy Sector Capacity Building

Form information auto-populates a back-end spreadsheet for easy transfer to the M&E database
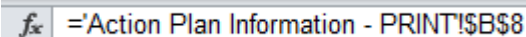
Example Input Tool

Database Table: 8 - Action Plans

Instructions
Copy-paste-value the contents of each newly completed row into their corresponding columns in a new row in the "8 - Action Plans"
tab of the ESCB Monitoring and Evaluation Database.

Data Verification Point of Contact	Action Plan Name	Action Plan Description	Relevant Task	Action Plan Status	Date of Status Change	Primary Stakeholder Institution Name	Gender Equity Addressed	Gender Inclusion Aspects
0	0	0	0	To develop		0	0	
0	0	0	0	In draft		0	0	
0	0	0	0	Proposed / In Review		0	0	
0	0	0	0	Finalized		0	0	
0	0	0	0	USAID approved		0	0	
0	0	0	0	Revised		0	0	

Instructions clearly explain how to transfer data from the input tool into the M&E database

Each field automatically pulls information from the graphical user interface

f_x ='Action Plan Information - PRINT'!B8

The order of columns in the back-end matches the order in corresponding tab of the M&E database

Hidden lists and other programmed data validation conditions facilitate data accuracy

Example Input Tool

![USAID logo - From the American People] **Energy Sector Capacity Building**

The M&E Database User Guide explains how to use the Excel-based tool

ESCB Monitoring & Evaluation Data Collection Tool User Guide

Navigation buttons: click to jump to a particular section

Introduction | Workbook Tabs | How Do I...? Quick Start | Indicator Data Sheet Guides

Navigation allow for easy access to sections of interest

Purpose
This Monitoring & Evaluation (M&E) Data Collection Tool is designed to capture the data necessary to report against the output, outcome, and impact indicators agreed-upon in the Energy Sector Capacity Building (ESCB) activity's performance management plan (submitted to USAID/Jordan under contract number AID-OAA-I-13-00018, task order AID-278-TO-13-00003). This user guide provides instruction on how to log data in the CCEB M&E Data Collection Tool.

Accompanying Documents
The M&E Advisor is expected to collect the required data for monitoring & evaluation purposes with the cooperation of technical Task Leads. A set of **template input tools** have been created and can be used to collect some of the relevant project data. Other existing data sources include the project's weekly reports and consultant trip reports. Those data are then logged and aggregated in this tool to report against the indicators described in the ESCB PMP. These inputs are subsequently fed into the Tableau-based **M&E dashboard**, which aggregates the information for high-level reporting. To access the M&E dashboard, install Tableau Reader from http://www.tableausoftware.com/products/reader.

Grouped information can be opened for review or collapsed to save space as desired

Workbook Tabs

Shared Data Tables (red tabs)
Click the "+" to the left to see details

Indicator Data Sheets (blue tabs)
Click the "+" to the left to see details

How Do I.... ? Quick Start Guide
To view detailed information on each section, click the "+" to the left.

... enter a new row of data for Indicator _____?

... add a new _____ to a drop-down menu?

Indicator Data Sheet Guides

A "How Do I...? Guide provides simple advice for quick start-up

User Guide | Capacity Building | DSN Programs | Gender Activities | Institutions | People | Renewable Energy | Source Documents | Stages | Training | .0) - Percent of EE Increase

Reference information in green tabs

Data validation lists in red tabs

Indicator data sheets in blue tabs

Data from input tools transfer into indicator-specific spreadsheets formatted to upload into Tableau

Example Indicator Spreadsheet

Drop-down menus facilitate data validation, reducing human error.

Descriptions of each field are provided in pop-up boxes

Columns are color-coded to denote auto-populated versus user-inputted fields

Energy Sector Capacity Building

Validation lists streamline the data cleaning process

Example Data Validation List

Capacity Building Drop-Down Menu Lists

Back to User Guide

Instructions
These lists feed into corr_____b.
To add a new option in e_____ress TAB to create a new row.
If you update this table, please also update the corresponding hidden table in the ESCB Institution TA Activity S__

Technical Assistance

TA Type	Definition
On-the-job training	Hands-on, dedicated training for specific individuals within an organization *Examples:* * Financial Model Training at each DISCO with their nominated staff
Workshop	Organized group training involving interactive exercises *Examples:* * Utility Capacity Building Workshop
Classroom training	Organized group training that is primarily instructor-led *Examples:* * Lessons Learned from Energy Efficiency, Bulk Procurement, and Replacement Programs around the World presentation
Specific advisory	Specific consultations provided in response to client or counterpart requests. *Examples:* * renewable energy grid code integration support to NEPCO, ERC; * M&E support for Jordan River Foundation's solar water heater program * PV array system sizing and installations for MPIC and JCD
Other	*Examples:* * Power Breakfast Executive Seminar

Note: Working group meetings, consultations, and focus groups do not qualify as trainings

Instructions clearly explain how this list integrates into the rest of the database and input tools

Navigation buttons facilitate movement throughout database

Excel table functionality enables dynamic drop-down lists

TURNING DATA INTO A CONVERSATION

M&E DASHBOARD

The M&E Dashboard summarizes and visualizes the data for each indicator

Example Indicator Dashboard View
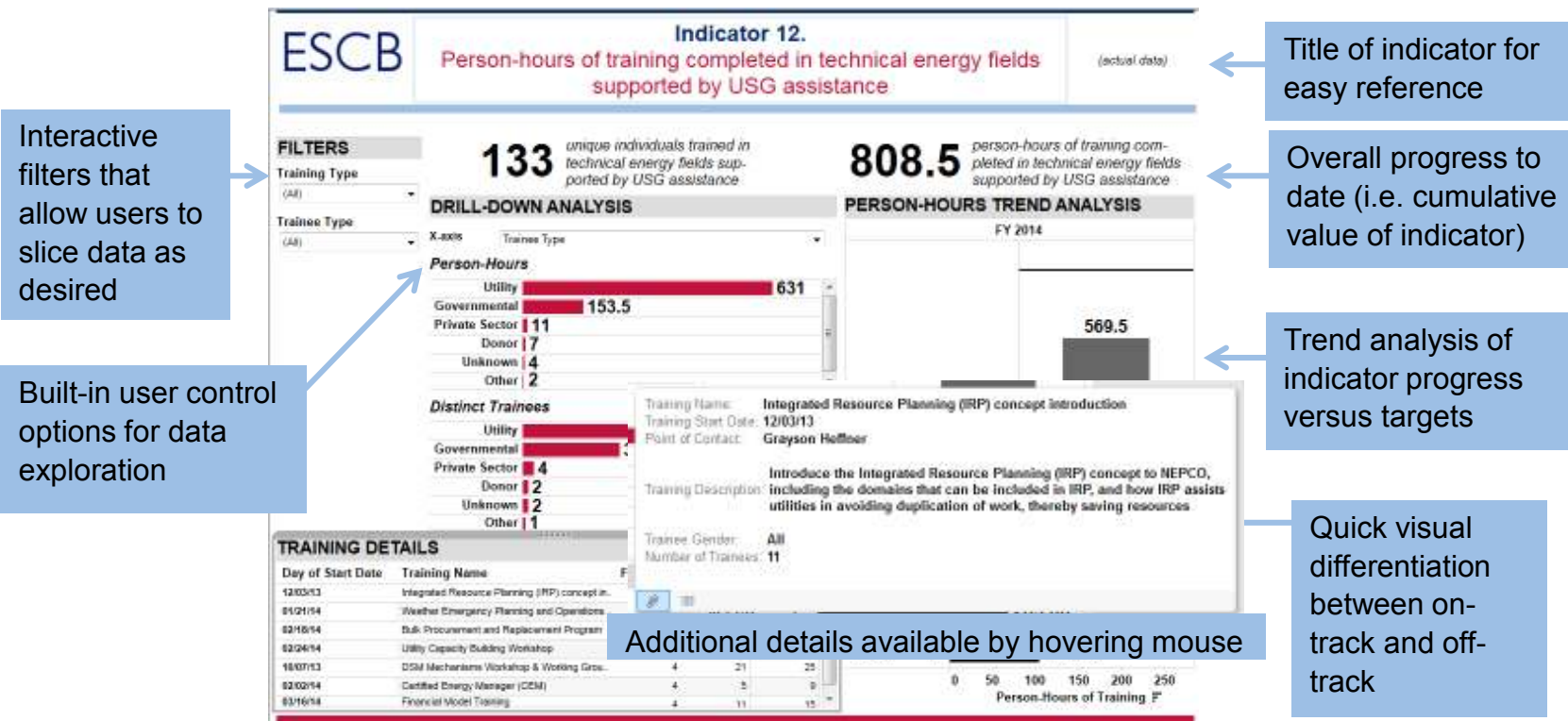
Interactive filters that allow users to slice data as desired

Built-in user control options for data exploration

Title of indicator for easy reference

Overall progress to date (i.e. cumulative value of indicator)

Trend analysis of indicator progress versus targets

Quick visual differentiation between on-track and off-track

Additional details available by hovering mouse

M&E Dashboard Demonstration

The ESCB team will use the M&E dashboard to facilitate quarterly "data learning" meetings

The quarterly data learning meeting, led by the Chief of Party and M&E Advisor, brings together technical teams to review performance data to:

1. Identify and understand the drivers of performance
2. Share challenges and success stories
3. Identify where action is needed

ESCB is able to make *evidence-based decisions on program implementation* using the performance data reviewed at data learning meetings.

ESCB M&E TOOLKIT

QUESTIONS?

APPENDIX

OVERVIEW

M&E RESULTS FRAMEWORK AND INDICATORS

ESCB Results Framework with Indicators: Part 1/2

USAID/Jordan DO#1

Broad-based, Inclusive Economic Development Accelerated

ESCB Program Objective/ CDCS IR1.3

Management of Energy Resources Improved

1. Percent of energy efficiency increases at electricity sub-station level due to USG assistance

2. Number of households implementing EE measures as a result of USG assistance

CDCS Sub-IR 3.1

Institutional Capacity and Policies Strengthened

3. Number of institutions receiving technical assistance due to USG assistance

4. Number of institutions with improved capacity to address clean energy issues as a result of USG assistance

CDCS Sub-IR3.2

More Efficient Use of Energy Achieved

5. Validated savings from utilities' electric demand due to incentive mechanism demand-side-management/energy efficiency programs

6. Number of ESCOs accredited/licensed

CDCS Sub-IR 3.3

Uses of Alternative Energy Facilitated

7. Number of megawatts installed through alternative energy projects in Jordan supported by USG assistance

KEY

Blue: Standard USAID Foreign Assistance (F) Indicator
Red: USAID/Jordan CDCS Indicator
Black: ESCB Custom Indicator

ESCB Results Framework with Indicators: Part 2/2

ESCB Activity IR 1	ESCB Activity IR 2	ESCB Activity IR 3	ESCB Activity IR 4
Institutions equipped to support clean energy	Enabling environment created, providing stakeholders incentive to promote EE	ESCOs are enabled to implement clean energy projects	Respond to Energy Sector Opportunities
8. Number of action plans developed	9. Number of laws, policies, strategies, plans, agreements, or regulations addressing clean energy officially proposed, adopted, or implemented as a result of USG assistance	8. Number of action plans developed 10. ESCO association created 11. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources	TBD

12. Person hours of training completed in technical energy fields supported by USG assistance

KEY
Blue: Standard USAID Foreign Assistance (F) Indicator Red: USAID/Jordan CDCS Indicator Black: ESCB Custom Indicator

ESCB's performance indicators and targets

Indicator	Baseline	FY14 Target	Progress to Date
1. Percent of energy efficiency increases at electricity sub-station level due to USG assistance	0% DSM/EE program not yet implemented	0 DSM/EE programs to begin late FY14	0 DSM/EE programs to begin late FY14
2. Number of households implementing EE measures as a result of USG assistance	0 DSM/EE program not yet implemented	0 DSM/EE programs to begin late FY14	0 DSM/EE programs to begin late FY14
3. Number of institutions receiving technical assistance due to USG assistance	0 Baseline defined to track technical assistance provided through ESCB	20 List of anticipated institutions included in Appendix 1	18
4. Number of institutions with improved capacity to address clean energy issues as a result of USG assistance	0 Baseline defined to track capacity building due to ESCB	0 FY14 is the defined baseline year	0 FY14 is the defined baseline year
5. Validated savings from utilities' forecasted electric demand due to incentive mechanism demand-side-management/energy efficiency programs	0 DSM/EE program not yet implemented	0 DSM/EE programs to begin late FY14	0 DSM/EE programs to begin late FY14
6. Number of ESCOs accredited/licensed	0 Accreditation program not yet implemented	0 Accreditation program to begin FY15 earliest	0 Accreditation program to begin FY15 earliest
7. Number of megawatts installed through alternative energy projects in Jordan supported by USG assistance	N/A To be defined based on Task 4 initiatives	0.15 MW Estimate dependent on known planned solar panel installations	0 0.03 MW in progress (PV installations at MOPIC and JCD)
8. Number of action plans developed	0 Baseline defined to track action plans developed due to ESCB	7 Assumes 3 WG Action Plans, ESCO Action Plan, and 3 Capacity Building Plans (MEMR, ERC, one DISCO)	4 Steering Committee, MEMR, ERC, ESCB Inclusion plan
9. Number of laws, policies, strategies, plans, agreements, or regulations addressing clean energy officially proposed, adopted, or implemented as a result of USG assistance	0 Expected measure will be the utility incentive mechanism	1 At least one agreement with a DISCO reached	0 DSM Framework Recommendations endorsed by SC 4/28/14
10. ESCO association created	No Governing body not yet established	Yes Association to be formed in FY14	No ESCB will support existing relevant associations such as EDAMA
11. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources	0 Baseline defined to track ESCB gender considerations	30% Based on an estimated approximately 36 female participants out of 120 total	33%
12. Person hours of training completed in technical energy fields supported by USG assistance	0 Baseline defined to track capacity building due to ESCB	1,200 Assumes average of 30 trainees attending 14 three hour trainings planned in Year 1	809 133 unique trainees

IMPLEMENTATION

ROLES AND RESPONSIBILITIES

The technical team plays a critical role in capturing M&E results

ESCB M&E Data Collection and Analysis Lifecycle

1 **M&E Advisor and Technical Team** collect data using standardized templates; **COP** reviews for quality

2 **M&E Advisor and/or delegate** enters data into ESCB M&E database, while reviewing for data quality

3 **M&E team** analyzes and visualizes progress towards indicator targets using the M&E dashboard

5 **Technical team** incorporates data insights into project design and execution with USAID approval

4 **Technical team** discusses analysis findings in regular "data learning" meetings and reports progress to USAID on a quarterly basis

Some indicators are relevant across all task areas
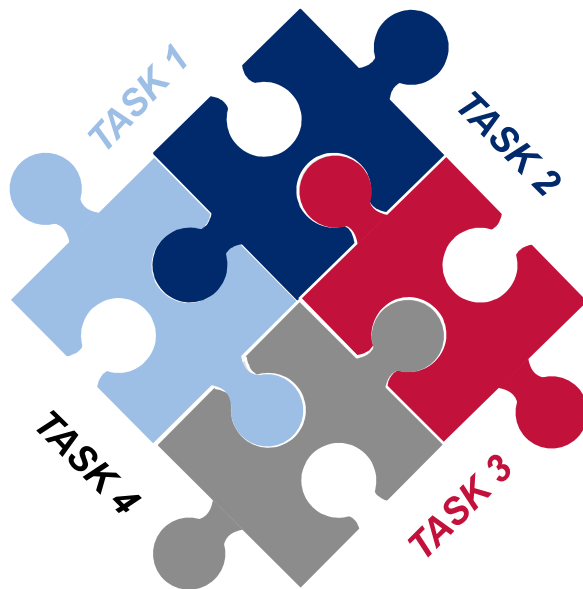
CDCS Sub-IR Level

3. *Number of institutions receiving technical assistance* due to USG assistance

4. *Number of institutions with improved capacity* to address clean energy issues as a result of USG assistance

ESCB Activity Level

8. *Number of action plans* developed

9. *Number of laws, policies, strategies, plans, agreements, or regulations* addressing clean energy officially proposed, adopted, or implemented as a result of USG assistance

11. *Proportion of female participants* in USG-assisted programs designed to increase access to productive economic resources

12. *Person-hours of training* completed in technical energy fields supported by USG assistance

Other indicators are only relevant to certain tasks

TASKS 1 – 2

TASK 4

TASK 3

ESCB Objective / CDCS IR Level

1. *Percent of energy efficiency increases* at electricity sub-station level due to USG assistance

2. *Number of households implementing EE* measures as a result of USG assistance

CDCS Sub-IR Level

5. Validated savings from utilities' forecasted electric demand due to incentive mechanism demand-side-management/energy efficiency programs

7. *Number of megawatts installed* through alternative energy projects in Jordan supported by USG assistance

6. *Number of ESCOs* accredited/licensed

ESCB Activity Level

10. *ESCO association* created

The technical team will be responsible for completing data input forms with the M&E Advisor

ESCB Data Input Tools

- **Institutional Technical Assistance (TA) Input Tool:** captures information of specific advisory and other non-training technical assistance provided by ESCB to energy sector institutions (Indicator 3)

- **Renewable Energy Initiative Input Tool:** tracks status of renewable energy initiatives technically supported by ESCB (Indicator 7)

- **Action Plan Input Tool:** tracks status of action plans developed by ESCB with counterpart organizations (Indicator 8)

- **Clean Energy Measure (agreements, policies, etc.) Input Tool:** tracks status of laws, policies, strategies, plans, agreements, regulations, procedures, or rules related to clean energy for which ESCB provides support (Indicator 9)

- **Gender Activity Input Tool:** captures information, including participant data, about activities designed to increase access to productive economic resources for females (Indicator 11)

- **Training Input Tool:** captures information, including participant data, about trainings conducted by ESCB to build the capacity of energy sector players (Indicator 12)